IN THE CLAIMS

1-38. (canceled)

39. (currently amended) A porous material for use in the catalytic conversion of exhaust gases comprising a first porous structure, a second porous structure, and an oxidation catalyst capable of catalyzing the oxidation of NO to NO_2 in the presence of oxygen and catalyzing the oxidation of a reducing agent, said oxidation catalyst enclosed within said first porous structure, said first porous structure including pores having dimensions such that said reducing agent is sterically prevented from contacting said oxidation catalyst, whereby said oxidation catalyst primarily catalyzes said oxidation of said NO to NO_2 as compared to said oxidation of said reducing agent during the catalytic conversion of said exhaust gases, said second porous structure being substantially free of said oxidation catalyst.

40. (currently amended) The porous material of claim 39 ~~including a second porous structure, and~~ including a reduction catalyst capable of selectively catalyzing the reduction of NO to N_2 in the presence of a reducing agent, said reduction catalyst disposed in said second porous structure, said second porous structure including pores having a dimension such that said reducing agent can contact said reduction catalyst, whereby said reduction catalyst can catalyze said reduction of NO_2 to N_2 in the presence of said reducing agent.

41. (previously presented) The porous material of claim 40 wherein said pores of said first porous structure are generally smaller than said pores of said second porous structure.

42. (previously presented) The porous material of claim 41 wherein said pores of said first porous structure have an effective size of from about 3-6 angstroms.

43. (previously presented) The porous material of claim 40 wherein said first and second porous structures are provided in the same layer or coating of said porous material.

44. (previously presented) The porous material of claim 40 wherein said first and second porous structures are provided in different layers or coatings of said porous material.

45. (previously presented) The porous material of claim 40 wherein said second porous structure has been adapted to the molecular size or absorption properties of said reducing agent.

46. (previously presented) The porous material of claim 40 wherein the ratio of said oxidation catalyst to said reduction catalyst is optimized, whereby said oxidation of NO to NO_2 substantially corresponds to said reduction of NO_2 to N_2.

47. (previously presented) The porous material of claim 40 comprising a first portion of said porous material disposed to initially receive said exhaust gas and a second portion of said porous material disposed to subsequently receive said exhaust gas, and wherein said first portion of said porous material includes more of said oxidation catalyst than said reduction catalyst and said second portion of said porous material includes more of said reduction catalyst than said oxidation catalyst.

48. (previously presented) The porous material of claim 40 wherein at least one of said first and second porous structures comprises a zeolite crystal structure.

49. (previously presented) The porous material of claim 48 wherein said first porous structure comprises a first zeolite and said second porous structure comprises a second zeolite.

50. (previously presented) The porous material of claim 49 comprising a physical mixture of said first and second zeolites.

51. (previously presented) The porous material of claim 49 comprising a layered structure comprising layers of said first and second zeolites.

52. (previously presented) The porous material of claim 51 wherein said layers of said first and second zeolites are arranged so that said second zeolite structure will contact said exhaust gases before said first zeolite structure.

53. (previously presented) The porous material of claim 49 wherein said second zeolite is applied by overgrowth onto said first zeolite.

54. (previously presented) The porous material of claim 49 wherein said first zeolite includes an outer surface and an inner surface, and the content of said oxidation catalyst in said outer surface of said first zeolite has been reduced as compared to the content of said oxidation catalyst in said inner surface by means of regulating the penetration depth or dispersion thereof.

55. (previously presented) The porous material of claim 49 including an additional crystal zeolite layer crystallized onto said first zeolite, said additional crystal zeolite layer including a reduced content of said oxidation catalyst.

56. (previously presented) The porous material of claim 49 wherein said first zeolite comprises crystal grains having optimized crystal grain sizes and shapes, whereby access of said reducing agent thereto is reduced and the effective oxidation of said NO to NO_2 is carried out.

57. (previously presented) The porous material of claim 49 wherein said first zeolite is selected from the group consisting of Ferrierite and Chabazite.

58. (previously presented) The porous material of claim 40 wherein said reducing agent comprises a hydrocarbon or a hydrocarbon including oxygen or sulfur.

59. (previously presented) The porous material of claim 40 wherein said reduction catalyst comprises an acidic zeolite catalyst.

60. (previously presented) The porous material of claim 40 wherein said reduction catalyst comprises a Brönstedt acid catalyst.

61. (previously presented) The porous material of claim 60 wherein said Brönstedt acid catalyst is selected from the group consisting of silver, copper, Rhodium, Indium, Iridium and combinations thereof.

62. (previously presented) The porous material of claim 39 wherein said oxidation catalyst is selected from the group consisting of platinum, palladium and mixtures thereof.

63. (previously presented) The porous material of claim 40 disposed on a substrate, wherein at least one of said first and second porous structures are attached to said substrate.

64. (canceled)

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76. (canceled)

77. (canceled)

78. (new) A porous material for use in the catalytic conversion of exhaust gases comprising a first porous structure having an outer layer, an oxidation catalyst capable of catalyzing the oxidation of NO to NO_2 in the presence of oxygen and catalyzing the oxidation of a reducing agent, said oxidation catalyst enclosed within said first porous structure and

substantially excluded from said outer layer thereof, said first porous structure including pores having dimensions such that said reducing agent is sterically prevented from contacting said oxidation catalyst, whereby said oxidation catalyst primarily catalyzes said oxidation of said NO to NO_2 as compared to said oxidation of said reducing agent during the catalytic conversion of said exhaust gases.

79. (new) The porous material of claim 78 including a second porous structure, and including a reduction catalyst capable of selectively catalyzing the reduction of NO to N_2 in the presence of a reducing agent, said reduction catalyst disposed in said second porous structure, said second porous structure including pores having a dimension such that said reducing agent can contact said reduction catalyst, whereby said reduction catalyst can catalyze said reduction of NO_2 to N_2 in the presence of said reducing agent.

80. (new) The porous material of claim 79 wherein said pores of said first porous structure are generally smaller than said pores of said second porous structure.

81. (new) The porous material of claim 80 wherein said pores of said first porous structure have an effective size of from about 3-6 angstroms.

82. (new) The porous material of claim 79 wherein said first and second porous structures are provided in the same layer or coating of said porous material.

83. (new) The porous material of claim 79 wherein said first and second porous structures are provided in different layers or coatings of said porous material.

84. (new) The porous material of claim 79 wherein said second porous structure has been adapted to the molecular size or absorption properties of said reducing agent.

85. (new) The porous material of claim 79 wherein the ratio of said oxidation catalyst to said reduction catalyst is

optimized, whereby said oxidation of NO to NO_2 substantially corresponds to said reduction of NO_2 to N_2.

86. (new) The porous material of claim 79 comprising a first portion of said porous material disposed to initially receive said exhaust gas and a second portion of said porous material disposed to subsequently receive said exhaust gas, and wherein said first portion of said porous material includes more of said oxidation catalyst than said reduction catalyst and said second portion of said porous material includes more of said reduction catalyst than said oxidation catalyst.

87. (new) The porous material of claim 79 wherein at least one of said first and second porous structures comprises a zeolite crystal structure.

88. (new) The porous material of claim 87 wherein said first porous structure comprises a first zeolite and said second porous structure comprises a second zeolite.

89. (new) The porous material of claim 88 comprising a physical mixture of said first and second zeolites.

90. (new) The porous material of claim 88 comprising a layered structure comprising layers of said first and second zeolites.

91. (new) The porous material of claim 90 wherein said layers of said first and second zeolites are arranged so that said second zeolite structure will contact said exhaust gases before said first zeolite structure.

92. (new) The porous material of claim 88 wherein said second zeolite is applied by overgrowth onto said first zeolite.

93. (new) The porous material of claim 88 wherein said first zeolite includes an outer surface and an inner surface, and the content of said oxidation catalyst in said outer surface of said first zeolite has been reduced as compared to the content of said oxidation catalyst in said inner surface

by means of regulating the penetration depth or dispersion thereof.

94. (new) The porous material of claim 88 including an additional crystal zeolite layer crystallized onto said first zeolite, said additional crystal zeolite layer including a reduced content of said oxidation catalyst.

95. (new) The porous material of claim 88 wherein said first zeolite comprises crystal grains having optimized crystal grain sizes and shapes, whereby access of said reducing agent thereto is reduced and the effective oxidation of said NO to NO_2 is carried out.

96. (new) The porous material of claim 88 wherein said first zeolite is selected from the group consisting of Ferrierite and Chabazite.

97. (new) The porous material of claim 79 wherein said reducing agent comprises a hydrocarbon or a hydrocarbon including oxygen or sulfur.

98. (new) The porous material of claim 79 wherein said reduction catalyst comprises an acidic zeolite catalyst.

99. (newly added) The porous material of claim 79 wherein said reduction catalyst comprises a Brönstedt acid catalyst.

100. (new) The porous material of claim 99 wherein said Brönstedt acid catalyst is selected from the group consisting of silver, copper, Rhodium, Indium, Iridium and combinations thereof.

101. (new) The porous material of claim 78 wherein said oxidation catalyst is selected from the group consisting of platinum, palladium and mixtures thereof.

102. (new) The porous material of claim 79 disposed on a substrate, wherein at least one of said first and second porous structures are attached to said substrate.